

M.Sc. Examination 2018
Semester-IV
Environmental Science
Course : MEC-41
(Environmental Biotechnology)

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin.

Answer Question **No.1** and **any four** from the rest.

1. Write short notes on **any four** of the following : 2×4=8
 - (a) Types of Biomarkers
 - (b) Bioindicators
 - (c) Terminating Seed
 - (d) *Dunaliella* sp.
 - (e) FBR
 - (f) IPM

 2. (a) What are modern fuels? 2+6=8
(b) How can various wastes be used for the production of biogas?

 3. (a) Distinguish between biostimulation and biosorption. 3+5=8
(b) How can biosorption be used for environmental clean-up?

 4. (a) Define phytoremediation. 1+5+2=8
(b) Discuss various processes involved in phytoremediation for remediating contaminated soils, sediments and water.
(c) What are the future scope of phytoremediation?

 5. (a) What are biofertilizers? 2+6=8
(b) How these could be used for achieving sustainable agriculture?

 6. (a) What is the working principle of bioelectrodes? 2+1.5+(3+1.5)=8
(b) How bioelectrodes are used for detecting health problems in human?
(c) Discuss the function and importance of glucometer.

 7. (a) Explain in details the principles of biosensor with a model. (2+1)+(3+2)=8
(b) Draw and label the parts of Amperometric Biosensor. Discuss its functions.
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